



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 40-8964; NRC-2012-0214]

Cameco Resources; Smith Ranch-Highland Uranium Project

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering the renewal of NRC source materials license SUA-1548, to authorize continued uranium in-situ recovery (ISR) operations at the sites under the Smith Ranch-Highland Uranium Project (Smith Ranch Project) (Docket No. 40-8964). The NRC has prepared an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for this licensing action.

DATES: The EA referenced in this document is available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID NRC-2012-0214 when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2012-0214. Address questions about NRC dockets to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For

technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: James Park, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-6954; e-mail: James.Park@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is considering the renewal of NRC source materials license No. SUA-1548 issued to Power Resources Inc. (doing business as Cameco Resources [Cameco]). License SUA-1548 authorizes Cameco to conduct ISR operations at the

following four sites under the Smith Ranch Project located in Wyoming: the Smith Ranch site in Converse County (which encompasses the contiguous Smith Ranch, Highland, and Reynolds Ranch properties); the North Butte remote satellite site in Campbell County; the Ruth remote satellite site in Johnson County; and the Gas Hills remote satellite site in Fremont and Natrona Counties. Therefore, as required by part 51 of title 10 of the *Code of Federal Regulations* (10 CFR part 51), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC performed an EA. Based on the results of the EA, the NRC has determined not to prepare an environmental impact statement (EIS) for the amendment, and is issuing a FONSI.

II. Environmental Assessment

Description of the Proposed Action

The proposed action would allow Cameco to continue ISR operations at the four sites under the Smith Ranch Project. As proposed, Cameco would continue to recover uranium from subsurface uranium deposits using the ISR process, open new wellfield areas for additional uranium recovery, perform aquifer restoration in wellfields where uranium recovery has ended, and conduct decommissioning activities as site-wide activities wind down. Additionally, Cameco requested NRC approval of increased ground water flowrates at certain project sites and the commencement of previously approved uranium recovery at the Reynolds Ranch satellite and at the Gas Hills remote satellite site. The proposed action is in accordance with the licensee's application dated February 1, 2012 (ADAMS Accession Nos. ML12234A537 and ML12234A539).

Need for the Proposed Action

The proposed action would allow Cameco to continue recovering uranium at the Smith Ranch Project sites. The licensee would process the recovered uranium into yellowcake at the existing central processing plant currently located on the Smith Ranch property and at the central processing facility located on the Highland property.

Yellowcake is the uranium oxide product of the ISR milling process that is used to produce various products, including fuel for commercially-operated nuclear power reactors.

Environmental Impacts of the Proposed Action

The NRC staff has assessed the potential environmental impacts from Cameco's continued ISR-related construction, operation, aquifer restoration, and decommissioning activities at the Smith Ranch Project sites. The NRC staff assessed the impacts of the proposed action on land use; historical and cultural resources; visual and scenic resources; climatology, meteorology and air quality; geology, minerals, and soils; water resources; ecological resources; socioeconomics; noise; traffic and transportation; public and occupational health and safety; and waste management. Impacts to all resources except ground water and noise were determined to be SMALL (i.e., not detectable or minor); ground water impacts were determined to be SMALL to MODERATE and noise impacts MODERATE (i.e., sufficient to alter noticeably, but not to destabilize, important attributes of the resource) to onsite workers and wildlife. The NRC staff concluded that renewal of source materials license SUA-1548 for the Smith Ranch Project would not significantly affect the quality of the human environment. Approval of the proposed action would not result in an increased radiological risk to public health or the environment.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed license renewal (i.e., the “No-Action” alternative). Under the No-Action Alternative, Cameco would transition ongoing ISR operations at the Smith Ranch and Highland properties and at the North Butte remote satellite site from active uranium recovery to aquifer restoration and decommissioning. A much smaller amount of yellowcake would be produced, resulting from aquifer restoration activities.

Decommissioning activities also would occur at the Reynolds Ranch satellite and the Ruth and Gas Hills remote satellite sites to remove existing infrastructure. Cameco would be required by 10 CFR part 40.42(d) to submit a detailed decommissioning plan to the NRC staff for review and approval at least 12 months before the planned commencement of final decommissioning. The NRC concluded that environmental impacts from the No-Action Alternative would be not significant.

Agencies and Persons Consulted

In accordance with its stated policy, on August 8, 2018, the staff provided the Wyoming Department of Environmental Quality (WDEQ) and the Wyoming State Historic Preservation Office (WY SHPO), with the draft EA for review and comment (ADAMS Accession Nos. ML18211A382 and ML18215A054). On August 29, 2018, the WDEQ stated that it had no comment on the draft EA, but noted one typographical error in the NRC’s transmittal letter (ADAMS Accession No. ML18247A356). The WY SHPO also responded on August 29, 2018, stating that the WY SHPO would not be commenting, considering its understanding that Section 106 consultation was completed during the original licensing for the project (ADAMS Accession No. ML18242A349).

On August 9, 2018, the NRC staff made sections of the draft EA concerning historic and cultural resources available on the NRC public web page for the Smith Ranch Project for public comment at <https://www.nrc.gov/materials/uranium-recovery/license-apps/smith-ranch/section106-smith-ranch.html>. On the same date, the NRC staff also made these same sections of the draft EA available to the Tribal Historic Preservation Officers (THPOs) from 27 Native American Tribes for their review and comment.

No comments were received from members of the public. In response to comments received from the THPO for the Northern Arapaho Tribe (ADAMS Accession No. ML18247A228), the NRC staff hosted two conference calls, on August 28 and 30, 2018, to discuss the staff's approach concerning protection of historic and cultural resources (ADAMS Accession No. ML18243A262); no THPOs attended these calls. The NRC staff also held a conference call with the Northern Cheyenne THPO on August 31, 2018 (ADAMS Accession No. ML18260A046). No written comments were received from the Northern Cheyenne THPO. However, the NRC staff addressed the Northern Arapaho THPO's comments provided on August 31, 2018, conference call in the final EA.

Additional Information

The NRC staff conducted its environmental review in accordance with 10 CFR part 51, which implements the requirements of the National Environmental Policy Act of 1969, as amended (NEPA) and following the NRC staff guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" (ADAMS Accession No. ML032450279).

In May 2009, the NRC staff issued NUREG-1910, “Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities” (herein referred to as the GEIS) (ADAMS Accession No. ML15093A368 and ML15093A486). In the GEIS, the NRC staff assessed the potential environmental impacts from construction, operation, aquifer restoration, and decommissioning of an in-situ leach uranium milling facility (also known as an ISR facility) located in four specific geographic regions of the western United States. Smith Ranch Project properties are located in two of these four regions.

Where applicable, this EA incorporates by reference relevant portions from the GEIS, and uses site-specific information from Cameco’s license renewal application and responses to NRC staff requests for additional information, and from independent sources to fulfill the requirements in 10 CFR 51.20(b)(8).

License SUA-1548 authorizes Cameco to conduct ISR operations at four properties under the Smith Ranch Project located in Wyoming: the contiguous Smith Ranch, Highland, and Reynolds Ranch properties in Converse County; the North Butte remote satellite site in Campbell County; the Ruth remote satellite site in Johnson County; and the Gas Hills remote satellite site in Fremont and Natrona Counties.

In the EA, the NRC staff assessed the potential environmental impacts from the continued construction, operation, aquifer restoration, and decommissioning of the sites under the Smith Ranch Project. The NRC staff assessed the impacts of the proposed action on land use; historical and cultural resources; visual and scenic resources; climatology, meteorology and air quality; geology, minerals, and soils; water resources; ecological resources; socioeconomics; noise; traffic and transportation; public and occupational health and safety; and waste management.

In addition to the action proposed by the licensee, the NRC staff addressed the No-Action Alternative that serves as a baseline for comparison of the potential environmental impacts of the proposed action. Under the No-Action Alternative, the NRC staff would deny renewal of License SUA-1548.

After weighing the impacts of the proposed license renewal and comparing to the No-Action Alternative, the NRC staff, in accordance with 10 CFR 51.91(d), sets forth its NEPA recommendation regarding the proposed action (granting the NRC license renewal request for the Smith Ranch Project). Unless safety issues mandate otherwise, the NRC staff recommendation related to the environmental aspects of the proposed action is that a renewed NRC license be issued. The EA for the proposed renewal of License SUA-1548 may be accessed at ADAMS Accession No. ML18257A071.

III. Finding of No Significant Impact

Based on its review of the proposed action, and in accordance with the requirements in 10 CFR part 51, the NRC staff has determined that renewal of source materials license SUA-1548 for the Smith Ranch Project would not significantly affect the quality of the human environment. In its license renewal request, Cameco proposed increased ground water flowrates at certain of the project properties with previously approved uranium recovery to commence at the Reynolds Ranch satellite and at the Gas Hills remote satellite site. No other significant changes in Cameco's authorized operations for the Smith Ranch Project were requested. Approval of the proposed action would not result in an increased radiological risk to public health or the environment. The NRC staff has determined that pursuant to 10 CFR 51.31, preparation of an EIS is not required for the proposed action and that, pursuant to 10 CFR 51.32, a FONSI is appropriate.

Dated at Rockville, Maryland, this 20th day of September 2018.

For the Nuclear Regulatory Commission.

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Division of Fuel Cycle Safety, Safeguards,
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